

# CHAPTER 1

## INTRODUCTION

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### 1-1. Purpose

This manual establishes minimum requirements and design objectives for utility systems supporting major fixed Command, Control, Communications, Computer, Intelligence, Surveillance, and Reconnaissance (C4ISR) facilities. The existence of the manual does not, in itself, authorize upgrade or modifications of existing C4ISR facilities solely to meet these requirements. Facilities required to fully comply with the provisions of the manual will be designated by the Joint Chiefs of Staff, a Military Department Headquarters, or a Major Command.

### 1-2. Scope

This manual shall be used in the engineering design, fabrication, and installation of specifically designated fixed ground-based facilities in a threat-hardened C4ISR network. Minimum performance requirements are prescribed for the design of highly reliable utility systems that will permit C4ISR operation free from man-made threats. This manual applies to both new construction and to retrofit of existing facilities. Use of the manual for threat protection of other ground-based communications-electronics facilities that require high reliability is also encouraged. There are three basic sizes of C4ISR installations for which the requirements of this manual are applicable. See chapter 10 for the electrical requirements for each of these installation types.

- a. First is a small C4ISR facility such as a remote telephone switch center, typically housed in a building of less than 1000 square feet of floor area. The power system requirements will be less than 250 kVA.
- b. Second is an average C4ISR facility such as a main computer/communication center, typically housed in a building of 25,000 to 40,000 square feet of floor area. The power system requirements will typically not exceed 2500 kVA.
- c. Third is a C4ISR complex that consists of several buildings and a central distribution power plant. The power system requirements will generally be on the order of ten MVA or greater.

### 1-3. References

Appendix A contains a list of references used in this manual.

### 1-4. Objectives

Survivable C4ISR capabilities are essential to a credible military deterrent. This manual supports threat-survivability objectives by providing standardized, highly reliable utility systems for support of fixed ground-based facilities in a threat-hardened C4ISR network. These uniform requirements ensure balanced threat hardening for all critical facilities in the network.